

### ABSTRACT

A system and methods are provided for selecting head-end equipment and services for digital cable service distribution systems. Enhancing CATV service capabilities to include digital services can be expensive, especially since design and configuration of head-end equipment requires a great deal of engineering expertise. The invention improves efficiency by providing an automated rule-based system and method to help ease that task. The invention also functions to present the listing of required components in a Bill of Material (BOM) format that could be implemented with customer specific pricing structures to facilitate purchase requisition and order fulfillment. Another function of the invention is to facilitate mapping between an end-user display channel, a terrestrial broadcast frequency, and a satellite communications frequency. The relationship between services, service providers, and the necessary component configurations are presented in an easily recognizable format, referred to as a "Channel Map." These features are provided by a user-interface that permits channel assignment and configuration tasks to be performed more easily. Although the invention is presented in the context of a networked solution, the rule-based system could just as well be implemented on a single computer system.

August 3, 2001